

WHAT IS CLAIMED IS:

1. A vehicle brake apparatus comprising:

a brake operating member operable by a vehicle driver;

a variable output mechanism which is disposed between the brake operating member and an output member, for mechanically changing a multiplying ratio of an output force in relation to an operational input force from the brake operating member in accordance with an operating stroke of the brake operating member; and

a brake controlling unit which is operated in accordance with the output force applied to the output member,

wherein a load sensor for detecting the output force is provided between the variable output mechanism and the output member.

2. The vehicle brake apparatus according to claim 1,

wherein the variable output mechanism further comprises:

an intermediate connecting member which is disposed on a supporting member fixed on a vehicle body such that the intermediate connecting member is pivotable about a second axis perpendicular to a operational plane of the brake operating member;

a first lever which is provided integrally with the intermediate connecting member, connected with the brake operating member and pivotable about the second axis together with the intermediate connecting member in accordance with the operating stroke of the brake operating member; and

a second lever which is provided integrally with the intermediate connecting member such that the second lever is apart from the first lever in the axial direction of the second axis and is connected with the output member for displacing the output member in accordance with a pivotal movement of the intermediate connecting member.

3. The vehicle brake apparatus according to claim 1 or 2, wherein the brake controlling unit is capable of controlling the brake force electrically, the vehicle brake apparatus further comprising:
a reaction force unit for applying a reaction force to the output member;
and
an electric control unit for controlling the brake force of the brake controlling unit electrically based on the output force value of the load sensor.

4. The vehicle brake apparatus according to claim 3 further comprising a stroke sensor for detecting the operating stroke of the brake operating member, wherein the electric control unit controls the brake force of the brake controlling unit based on detected values of both the load sensor and the stroke sensor.

5. The vehicle brake apparatus according to claim 4, wherein the brake operating member is disposed on the supporting member fixed on the vehicle body such that the brake operating member is pivotable about the specified first axis, and the stroke sensor is disposed on

the supporting member coaxial with the first axis for detecting the amount of pivotal movement of the brake operating member